

# (12) UK Patent Application (19) GB (11) 2 350 263 (13) A

(43) Date of A Publication 22.11.2000

(21) Application No 9906811.6

(22) Date of Filing 24.03.1999

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(51) INT CL<sup>7</sup>  
H04M 11/04 // A61B 5/00, H04Q 7/22

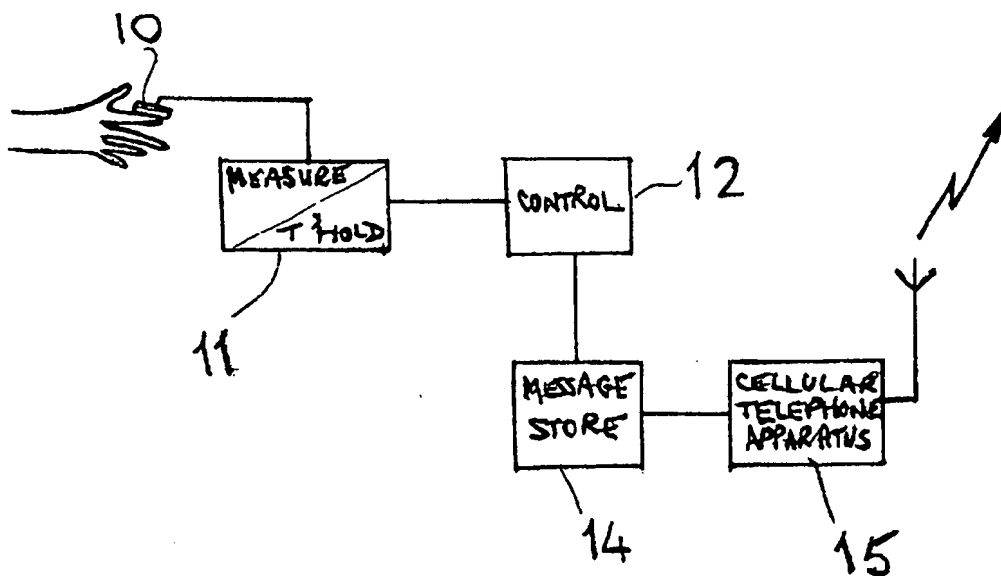
(52) UK CL (Edition R )  
H4L LDA  
H4K KOB  
U1S S1025

(56) Documents Cited  
GB 2317477 A DE 019731986 A JP 110070086 A

(58) Field of Search  
UK CL (Edition R ) H4K KOB , H4L LDA  
INT CL<sup>7</sup> A61B 5/00 5/02 5/0205 , G08B 25/10 , G08C  
17/02 , H04M 11/00 11/02 11/04 , H04Q 7/22  
Online: WPI, JAPIO, EPODOC

(54) Abstract Title  
Providing an alert of an abnormal medical condition

(57) An animate object such as a human or farm animal is monitored, for example body temperature, blood pressure, pulse rate and respiration and any deviations from a threshold cause a stored message 14 to be transmitted by a cellular telephone 15. The message may be in the form of short message service (SMS) or a stored voice message. The arrangement may also comprise a timer for causing a message to be sent via the cellular telephone at times determined by the timer.

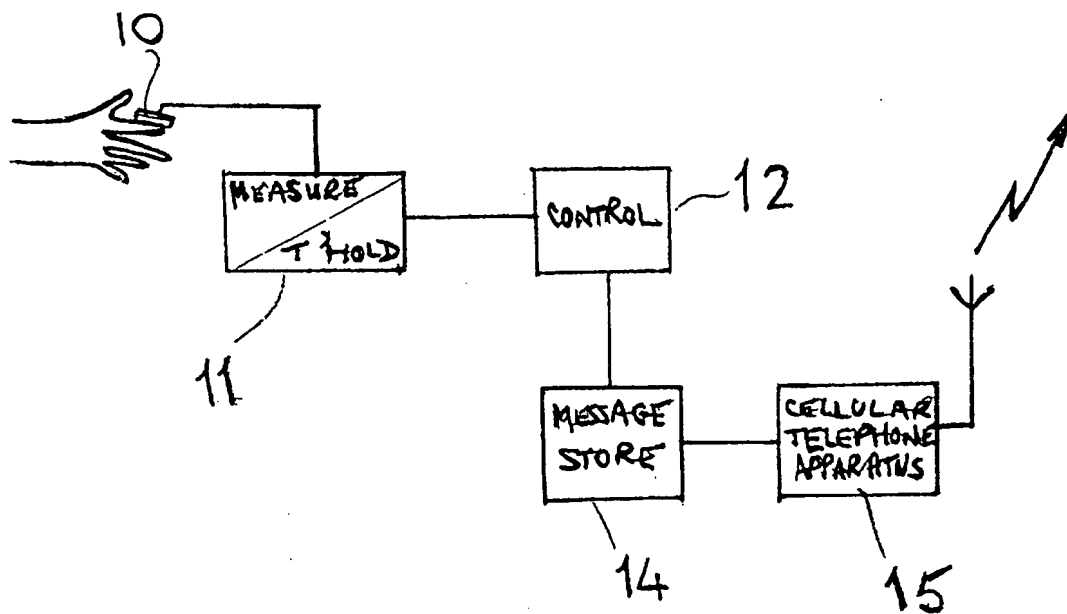


At least one drawing originally filed was informal and the print reproduced here is taken from a later filed formal copy.

The claims were filed later than the filing date but within the period prescribed by Rule 25(1) of the Patents Rules 1995.

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1/1



Monitoring Apparatus

The present invention relates to apparatus for monitoring objects in general and persons in particular.

5           It is known to monitor objects and to transmit information about the object over a landline. This is inconvenient as the object being monitored either has to be connected to the landline or within range of a cordless telephone apparatus connected to a landline. These are usually of short range hence the inconvenience.

10           The present invention provides apparatus for monitoring objects, and in particular animate objects such as humans or farm animals, comprising means for sensing a parameter associated with the object, a storage means for storing at least one message indicative of the parameter being sensed, and cellular telephone means for transmitting the stored message.

15           Preferably, the sensing means is arranged to sense one or more of human body temperature, pulse, blood pressure and respiration among other things. Sensing means also preferably includes thresholds beyond which a message will be sent via the cellular telephone means. The message is preferably in the form of a data message eg. using a short message service or a stored voice message.  
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In order that the present invention be more readily understood, an embodiment thereof will now be described by way of example with reference to the accompanying drawing which shows diagrammatically monitoring apparatus according to the present invention.

25           Although the present invention has a wide number of applications, the preferred embodiment will be described in relation to monitoring a person and sending a message by a cellular telephone apparatus, which message is indicative of a parameter or characteristic of the person.

30           As shown in the drawing, the apparatus comprises a number of modules arranged to measure a sense parameter, compared the measurement with

at least one threshold and transmit an appropriate message as a result of the comparison over an existing cellular network.

The apparatus comprises a sensor 10 arranged to sense a parameter or characteristic of a person. As shown, this is a simple transducer applied to one or more fingers of the person which is capable of sensing pulse and/or blood pressure. The output of the sensor 10 is fed to a measurement circuit 11 where a value of the sense parameter or characteristic is determined and this value is compared with a predetermined value or a range of values. If pulse or blood pressure as determined by the circuit 11 varies from the predetermined value or varies by a predetermined amount then an appropriate control signal from a control unit 12 is sent to a messaging unit 14 to cause an appropriate message to be transmitted by cellular telephone apparatus 15. The messaging unit 14 stores one or more messages. In the case where more than one message is stored, the control signal from the unit 12 is used to select the appropriate one. The cellular telephone apparatus 15 need only be the basic essentials of circuitry since no display nor a keyboard is required. The apparatus 15 can be pre-programmed with one or a selected plurality of numbers and be conditioned to automatically call the number or numbers concerned. Preferably, the message is in the form of a data message eg. a short message service (SMS) message. However, it could be a voice message if desired.

The message may be received by another cellular phone or it can be sent to a base cellular unit connected to a computer which can forward fax or e-mail messages as a result of the reception of an SMS message. It will be appreciated that the apparatus can be used as a safety device to send a message to a doctor or nurse as a result of a body characteristic or parameter being out of a safe range.

It will be appreciated also that body characteristics or parameters could be combined with other signals such as timing signals or even location signals in order to produce appropriate messages.

## Claims:

1. Apparatus for monitoring animate objects comprising means for sensing a parameter associated with the object, storage means for storing at least one message indicative of the parameter being sensed, and cellular telephone means for transmitting the stored message.  
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2. Apparatus according to claim 1, wherein the sensing means includes threshold means, said at least one message being selected in response to derivation from a threshold.  
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3. Apparatus according to claim 2, wherein the message is in the form of a data message.
- 15 4. Apparatus according to claim 1 or 2, wherein the message is in the form of a short message service message or a stored voice message.
5. Apparatus according to any one of the preceding claims wherein the sensing means is arranged to sense one or more of body temperature, blood pressure, pulse rate and respiration.  
20
6. Apparatus according to any one of the preceding claims, and comprising timer means for causing a message to be sent via the cellular telephone apparatus at times determined by the timer means.